ABSTRACT OF THE INVENTION

A low bit rate phase excited linear prediction type
speech encoder filters a speech signal to limit its
bandwidth and then fragments the filtered speech signal
5   into speech segments. The speech segments are decomposed
into a spectral envelope and an LP residual signal. The
spectral envelope is represented by LP filter coefficients.
The LP filter coefficients are converted into line spectral
frequencies (LSF). Each speech segment is also classified
10 as one of a voiced segment and an unvoiced segment based on
a pitch of the segment. Parameters are extracted from the
LP residual signal, where for an unvoiced segment the
extracted parameters include pitch and gain and for a
voiced segment the extracted parameters include pitch, gain
15 and excitation level. The extracted parameters are then
quantized.